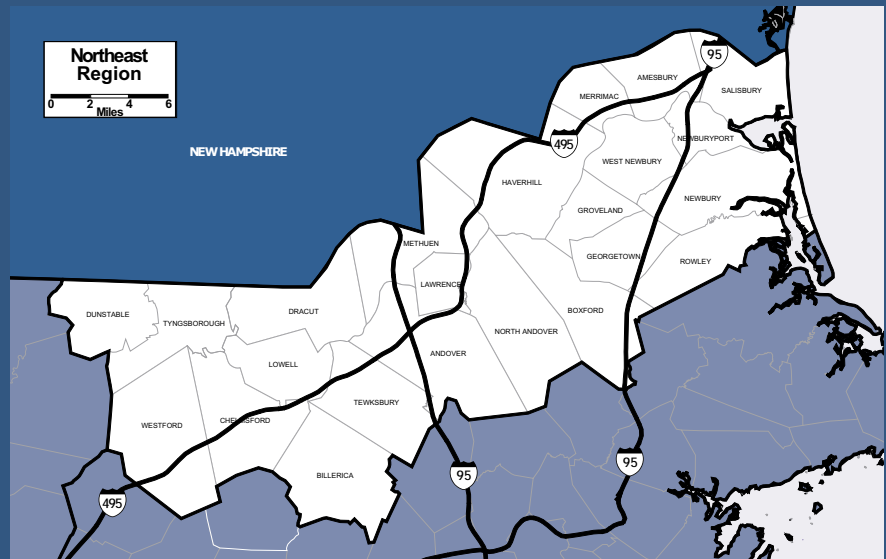
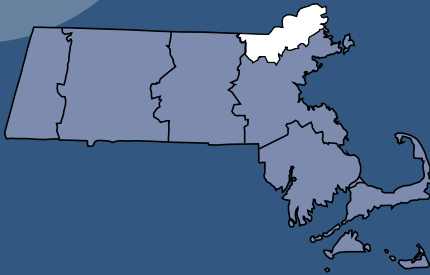


northeast region



The Northeast Region borders New Hampshire to the north and the Atlantic Ocean to the east as far south as Rowley and extends along the I-495 corridor from Westford through Lowell and Lawrence to Salisbury. It includes large parts of Essex and Middlesex counties and twenty-three cities and towns ranging from the old mill cities of Lowell, Lawrence, and Haverhill to towns that have recently witnessed explosive growth, such as Andover, Chelmsford, and Westford.

Mills along the Merrimack River once fueled the nation's Industrial Revolution, and they fueled the economy of the Northeast Region into the post-World War II era. Since 1950, however, three

trends have dominated the regional economy: 1) the sharp decline of the textile industry; 2) the Cold War buildup and post-Cold War reduction of defense spending; 3) and the meteoric emergence and eventual flame-out of the minicomputer industry.

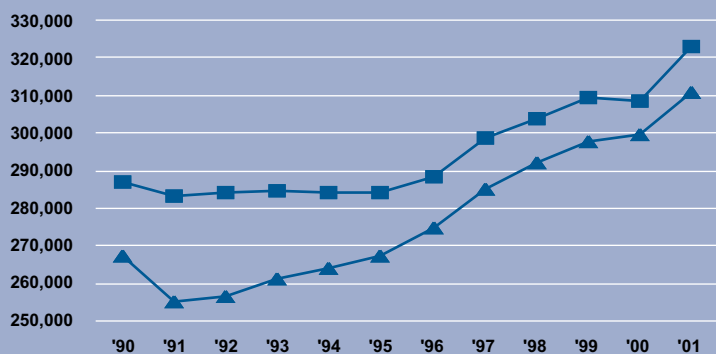
The legacy of its roller coaster economic history is a rich concentration of innovative national and international high-tech firms, many of them supported by an array of locally-owned companies, and a host of agencies and organizations concerned with issues such as job training, immigrant business assistance, and affordable housing that are key to the Region's sustained development. It has remained the State's high-tech manufacturing growth engine and a powerful stimulus for the Commonwealth's spectacular economic growth in the 1990s.

In addition to its strength in high-tech manufacturing, several cities and towns promote tourism linked to agriculture, the sea, or the nation's industrial heritage; parts of the Region are rural and relatively uncongested. Whale watches, cultural festivals, golf, beaches, coastal and mountain hiking, and professional baseball and hockey contribute to the Northeast's lifeblood.

Passenger rail connections run from Lowell to Boston, linking several cities along the North Shore, and rail service has recently expanded to include stops in New Hampshire and Maine. The Region is proximate to several airports, including Logan International, Hanscom Field, the Worcester regional airport, and Manchester, New Hampshire. Rapid industrial, commercial, and

figure 6-1

Northeast Region Labor Force and Employment



Source: Bureau of Labor Statistics, LAUS (Household)

■ Labor Force ▲ Employment

residential growth along its interstate and State highways, fueled by the late 1990s surge in high-tech manufacturing and software services, has generated significant automobile congestion and placed great stress on the Region's infrastructure.

Economic Overview

Employment¹

The Northeast Region responded well to the opportunities of the 1990s and performed significantly better than the Commonwealth as a whole. Spurred by vigorous growth in software, telecommunications, and related business services, employment grew 16 percent from 1990 to 2001 (versus 12.4 percent in the State), the workforce expanded 12.6 percent (versus 6 percent)(see figure 6-1), and the population 8.6 percent (versus 5.5 percent). Job creation exceeded workforce gains, especially from 1993 to 1996, causing unemployment to fall sharply (see figure 6-2). Until the downturn at the end of 2000, firms struggled to find engineers and other highly skilled workers to support this growth.

Employment by Major Industry Sector

What does the Region's industrial structure look like and how does it compare to that in 1993? In broad brushstrokes, there was a shift from manufacturing to services during the expansion that ran from 1993 until 2000. Although manufacturing employment² grew, the sector's share of employment slipped from 25.0 to 20.8 percent. Services gained a bit more than manufacturing lost, rising from 33.2 to 37.9 percent of employment in the Region (see figure 6-3).

There was no change in the industries that were the Region's top five employers from 1993 to 2000, although rankings shifted a bit (see figure 6-4).

When using annual payroll to identify the Region's top five industries, educational services and eating and drinking places fall off the list and are replaced by wholesale trade/durable goods and industrial and commercial machinery and computer equipment (see figure 6-5 on next page).

¹ The data in this section on the number of people employed, in the labor force, and unemployed are taken from the household survey. They therefore will not match the employer-based data used in other sections that report the number of payroll jobs.

² Employment is measured here using the Bureau of Labor Statistics, ES-202 series, which are employer reports of payroll jobs rather than household-based measures of employed or unemployed people. As a result, the numbers will differ from employment figures based on the household survey presented in other sections of the document.

figure 6-2

Northeast Region Unemployment Rate

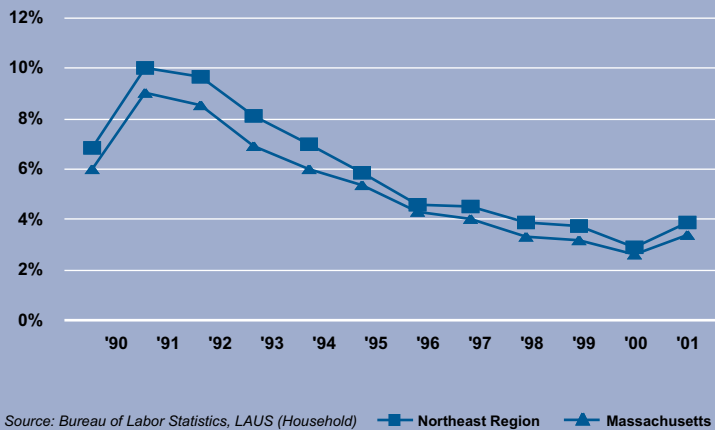


figure 6-3

Northeast Region Employment by Major Industry

	1993	2000	Percent of 2000 Total
Agriculture, Forestry, Fishing, and Mining	2,673	3,807	0.9
Construction	13,258	19,444	4.4
Manufacturing	87,995	91,419	20.8
Transportation and Public Utilities	16,759	21,242	4.8
Wholesale Trade	18,761	24,636	5.6
Retail Trade	70,017	79,976	18.2
Finance, Insurance and Real Estate	13,942	17,301	3.9
Services	116,987	166,366	37.9
Government	12,171	14,952	3.4
Total	352,563	439,143	100.0

Source: Division of Employment and Training, ES-202

figure 6-4

Northeast Region Top 5 Industries by Employment

Sector	1993	Persons	Sector	2000	Persons
Health Services		16,630	Health Services		41,876
Educational Services		36,745	Business Services		37,582
Eating and Drinking Places		10,504	Educational Services		36,148
Electronic Electrical Equipment & Components Except Computer Equipment		17,107	Eating and Drinking Places		28,400
Business Services		13,771	Electronic Electrical Equipment & Components Except Computer Equipment		22,357

Source: MA Division of Employment and Training

figure 6-5

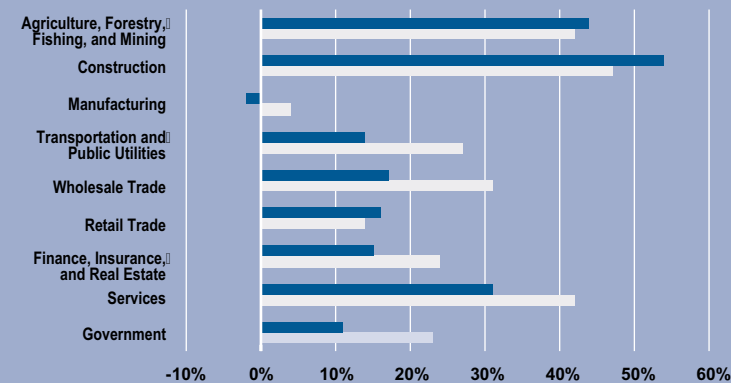
Northeast Region Top 5 Industries by Total Annual Payroll

1993		2000	
Sector	Year 2000 Dollars	Sector	Year 2000 Dollars
Health Services	1,330,152,745	Business Services	2,374,560,896
Transportation Equipment	931,974,188	Health Services	1,546,911,528
Educational Services	876,305,186	Wholesale Trade - Durable Goods	1,527,769,864
Electronic Electrical Equipment & Components Except Computer Equipment	868,083,667	Electronic Electrical Equipment & Components Except Computer Equipment	1,510,299,172
Machinery and Computer Equipment	829,801,756	Industrial and Commercial Machinery and Computer Equipment	1,288,016,168

Source: MA Division of Employment and Training

figure 6-6

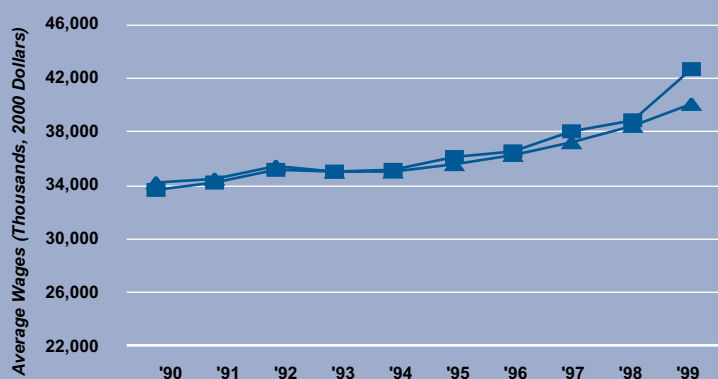
Change in Employment, by Major Industry, Northeast Region: 1993 to 2000



Source: MA Division of Employment and Training

figure 6-7

Northeast Region Average Real Wages



Source: MA Division of Employment and Training, ES-202

The Critical Importance of Manufacturing

The Commonwealth may lay legitimate claim to being the birthplace of American Industry, with the Northeast Region at its core. While the importance of manufacturing has declined in the Commonwealth as in the nation, it remains critical to the Region's economic well-being. Manufacturing establishments provide 20.8 percent of employment in the Northeast Region, well above the State figure of 13.4 percent. Pay in high-tech manufacturing establishments often far exceeds the State's average. Computer and related hardware manufacturing pays in excess of 185 percent of the State's average wage, industrial machinery manufacturing pays 174 percent, instruments 164 percent, and electronic equipment 151 percent. Because of these relatively high wages, manufacturing in the Northeast Region generates 29.5 percent of total payroll, compared to 16.7 percent statewide. Largely on the strength of its high-tech manufacturing sector, real average wages in the Region have tracked higher than the State average since 1995, widening the gap dramatically since 1998.³

Twenty-first century goods producers place great emphasis on capital-intensive activities and their investments often result in purchases from firms in the Region and the State. Goods producers also rely more and more on research into such things as new materials, the life sciences, opto-electronics, and wireless communications. Much of this research is conducted at colleges and universities and in private laboratories in the Northeast and Greater Boston Regions. Manufacturers apply state-of-the-art technologies to boost the output of their employees. Finally, they contract for many business services, such as payroll preparation, benefits calculation, marketing research, and specialized production that expand the regional economy. Manufacturing's significance thus spreads well beyond the employment figures and its importance cannot be underestimated (see figure 6-6 and 6-7).

The Northeast Region Export Sector

As explained in Chapter 2, a healthy Export Sector is critical to a Region's economic success. The sidebar in that Chapter on "The Massachusetts Export Sector" presented six large industry clusters as the key components of the Commonwealth's Export Sector. These clusters were identified in earlier State policy documents and studies, specifically *Choosing to Compete*⁴ and the more recent *Knowledge Sector Powerhouse*.⁵ They include four knowledge-based Clusters – Information Technology, Health Care, Financial Services, and Knowledge Creation. They also include two clusters that are less knowledge intensive; Travel and Tourism and, "Traditional Manufacturing" (manufacturing industries, such as paper, plastics and rubber, metalworking, and machinery, that are not part of the Information Technology or Health Care clusters). The discussion below uses this framework to explore the Northeast Region's export sector.

Figure 6-8 shows export cluster growth in the region as compared to Massachusetts. When interpreting the results of our analysis, please note that the employment figures reported for these large industry clusters are not meant to represent export sector jobs. The Health Care Cluster, for example, includes physicians serving the local population. A finer picture of the composition of the Region's export sector, and the extent to which it has become part of the wider Knowledge-based Economy, is developed in the discussions that follow. Also, note that some of the following charts show no data for some industries in the export clusters. This does not necessarily mean that the industry is absent. Federal rules prohibit access to data that could provide information about individual firms. The lack of industry data could be due to this limitation.

Knowledge Creation

Growth in employment in the Knowledge Creation export cluster generally mirrored that of the State. The higher education sector, grew substantially in both absolute and percentage terms. Employment in this sector grew from 1,927 in 1993 to 5,338 in 2000. Significant growth was also experienced by the engineering and architectural services sector. Firms in this sector had employment growth of 76% (+1,082 jobs) during this same period (see figure 6-9). A growing demand for highly-skilled "knowledge workers" by the Region's high-tech employers may be partly responsible for higher education growth.

Information Technology

Both the hardware and software sectors expanded rapidly, adding jobs between 1993 and 2000. The surge in communications hardware manufacturing, which emerged to build-out of the worldwide Internet, wireless, and networking revolution, was nothing short of astounding. Only that performance could take the luster away from the impressive growth of Region's computer and communications software and services industries which added nearly 7,500 jobs between 1993 and 2000. Computer, electronic, and electrical equipment manufacturing did not see much employment growth over the 1990s (see figure 6-10). Nevertheless, electronic and electrical equipment and the large SIC "industrial machinery" category, which includes computers and related hardware, ranked first and second in the State for total dollar value of exports throughout much of the 1990s.

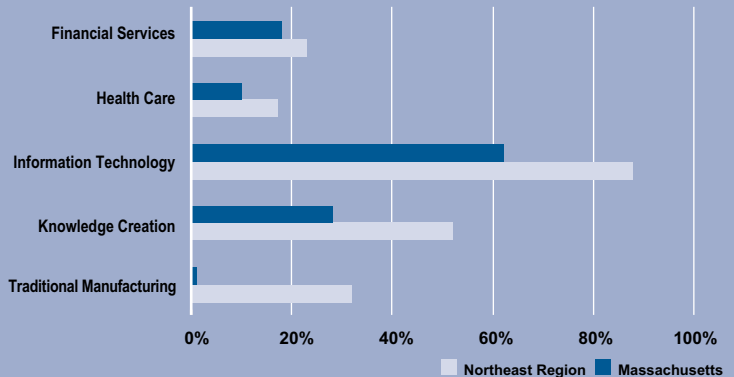
³ The U.S. consumer price index (CPI) was used to adjust nominal wages for the effects of inflation.

⁴ Massachusetts Executive Office of Economic Affairs and the University of Massachusetts, (Boston, 1993).

⁵ Robert Forrant, Philip Moss, and Chris Tilly, (Boston: UMass Donahue Institute, 2001).

figure 6-8

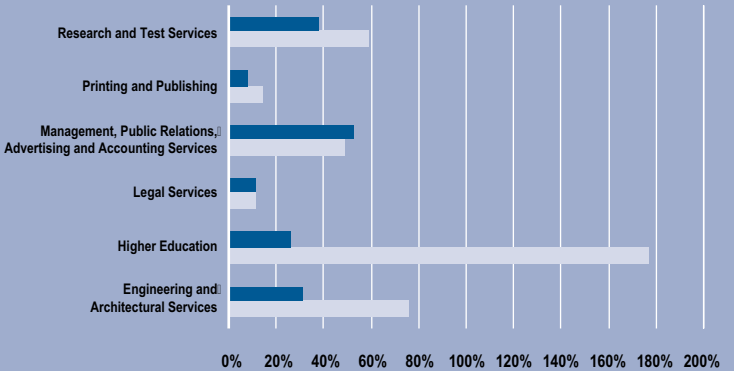
Employment Change in the Commonwealth's Export Clusters: Northeast Region, 1993 to 2000



Source: Forrant et al., "Knowledge Sector Powerhouse." University of Massachusetts Donahue Institute. 2001

figure 6-9

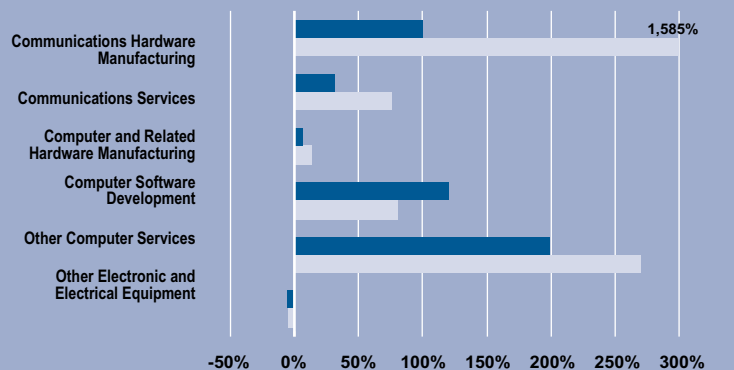
Knowledge Creation: Change in Employment, Northeast Region: 1993 to 2000



Source: MA Division of Employment and Training

figure 6-10

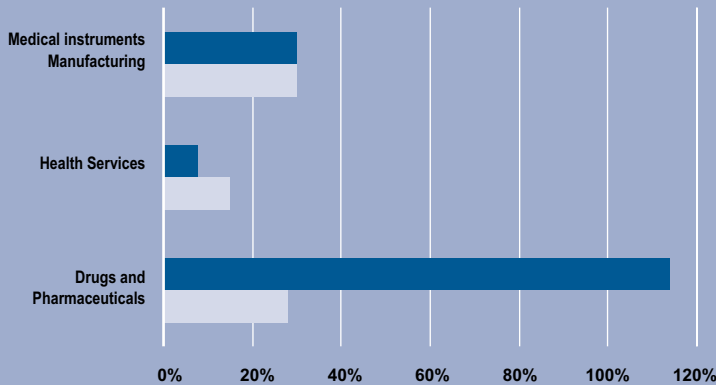
Information Technology: Change in Employment, Northeast Region: 1993 to 2000



Source: MA Division of Employment and Training

figure 6-11

Health Care: Change in Employment, Northeast Region: 1993 to 2000



Source: MA Division of Employment and Training

■ Northeast Region ■ Massachusetts

Health Care

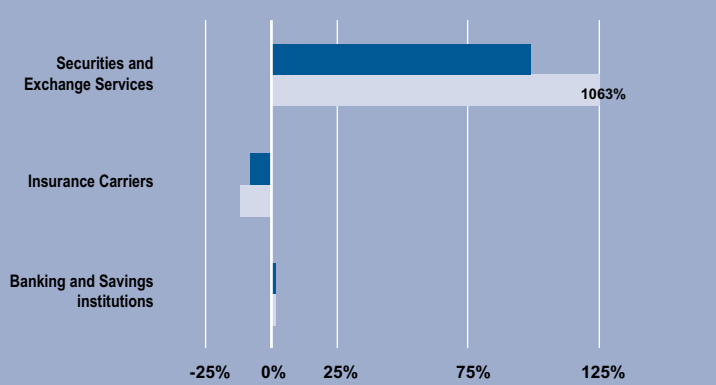
Employment in the Region's large Health Care Cluster was led by health services, which added over 5,000 jobs between 1993 and 2000, and expanded at a rate exceeding that of the State (15% in the Region, 8% versus for the State as a whole). Regional employment in the dynamic medical instruments manufacturing sector expanded at the same rate as the State as a whole. While the drugs and pharmaceuticals sector grew robustly – employment expanded 28% between 1993 and 2000, this sector grew much more slowly in the Northeast than it did statewide (see figure 6-11).

Financial Services

During the 1990s, the Northeast Region became increasingly attractive to financial services firms seeking locations for “back office” facilities. This can be seen in the tremendous growth in employment in the securities and exchange services sector which added over 2,200 jobs between 1993 and 2000. During this same period employment in the Insurance sector declined by 12 percent. Employment in the banking sector remained level. (see figure 6-12)

figure 6-12

Financial Services: Change in Employment, Northeast Region: 1993 to 2000



Source: MA Division of Employment & Training

■ Northeast Region ■ Massachusetts

Traditional Manufacturing

Much of the Region's business activity is concentrated along the I-495 corridor at the intersections of I-495, I-93, and I-95. Many of the jobs are in three high-skill, high-wage, export-oriented industries: fabricated metal, industrial machinery (not including computer and related hardware), and instruments (see figure 6-13).

Travel and Tourism

The growing impact of the Travel and Tourism cluster in the Northeast Region can be clearly seen in the Region's hotel industry. In the year ending June 2000, hotels and motels in Essex County grossed an estimated \$112 million in room sales, up 29 percent over the year ending June 1997.⁶ These expenditures define a conservative estimate of traveler spending. This is because total spending typically includes meals, retail purchases, and attractions, in addition to spending on accommodations.

Room sales growth, which lagged behind the statewide growth rate of 37 percent, supported limited growth in the industry. Between 1997 and 2000, the number of hotels in Essex County remained constant, at eighty-two. Employment expanded 36 percent, to 2,716 workers. Pay in the industry is low, and frequently offers mostly part-time jobs. Yet average real wages increased 25 percent in this period, to \$20,044.

figure 6-13

Traditional Manufacturing: Change in Employment, Northeast Region: 1993 to 2000



Source: MA Division of Employment and Training

■ Northeast Region ■ Massachusetts

Demographics

Population

A strong economy contributed to an 8.6 percent increase in the Region's population. This compares favorably to the 5.5 percent growth across the Commonwealth and resulted in a slight gain in the Region's share of the State population (see figure 6-14).

Resident Age Distribution

The Region's population is aging. In the decade of the 1990s, its median age increased by three full years, going from 32.3 to 35.3 years, compared to the Commonwealth's increase of 2.8 years, from 33.8 to 36.6. Residents aged 19 to 44 made up 45 percent of the regional population in 1990, but only 40 percent in 2000. This is a worrisome trend, for it implies the loss of a portion of the college-educated skill base. Nor can the Region expect much relief in the future: the 19-24 cohort fell more than 20 percent, from 58,733 to 46,845 (see figure 6-14).

Just as this skill base loss poses a significant challenge, so too does the growth of the under-18 population. Cities and towns are expected to educate this burgeoning group, a task made difficult by any protracted economic downturn or decline in tax revenues. The largest population gain came in the 45-64 cohort. As these older workers retire, they will join the under-18 cohort in requiring an array of public services, such as daycare and elderly housing. The fall-off of residents 19-24, as well as low growth among the 25 to 44 cohort portends labor shortages and a shrinking taxpayer base.

Resident Racial Distribution

The Region's population was almost 90 percent White in 1990, compared to 86 percent in 2000. Slightly more diverse than the State as a whole, the Northeast Region's non-white population resides mainly in Lowell and Lawrence. The Region also has the largest percentage of Hispanics anywhere in the Commonwealth other than the Pioneer Valley.⁷

⁶ Estimate based on FY 2000 State room occupancy tax collections, which are levied at 5.7% of the room rate.
⁷ Data describing change in race/ethnic mix must be used with caution. For more information, see the Part II Introduction

figure 6-14
Northeast Region Demographic Summary

	Northeast Region			MA		
	1990	2000	Change	1990	2000	Change
Total population	541,841	588,639	8.60%	6,016,425	6,349,097	5.50%
Age (share of total)						
Under 18	26.0%	27.1%	1.1%	22.5%	23.6%	1.1%
19-24	10.8%	8.0%	-2.9%	11.8%	9.1%	-2.7%
25 to 44	33.9%	31.8%	-2.0%	33.6%	31.3%	-2.2%
45 to 64	17.8%	21.8%	4.0%	18.5%	22.4%	3.8%
65 and over	11.5%	11.3%	-0.2%	13.6%	13.5%	-0.1%
Race/Ethnicity (share of total)						
White	89.6%	83.8%	-5.9%	89.8%	84.5%	-5.3%
Black	1.9%	2.0%	0.2%	5.0%	5.4%	0.4%
Asian	3.4%	5.0%	1.7%	2.4%	3.8%	1.4%
Other race	5.1%	6.9%	1.8%	2.8%	4.0%	1.2%
Two or more races*	na	2.2%	na	na	2.3%	na
Hispanic (of any race)	8.7%	12.1%	3.4%	4.8%	6.8%	2.0%

* the category of persons with two or more races did not exist in the 1990 Census
Source: U.S. Bureau of the Census, Decennial Population Census

figure 6-15
Northeast Region Housing Supply

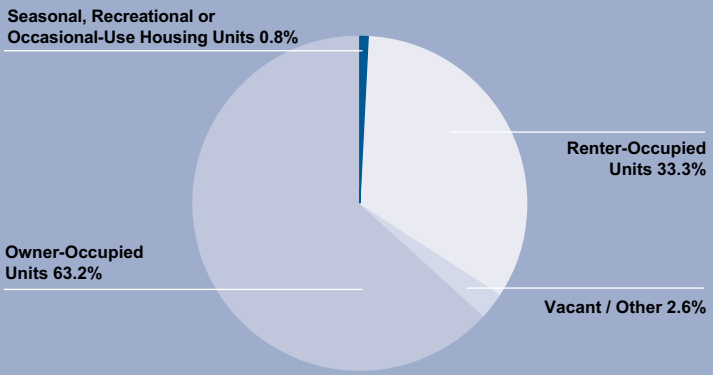


figure 6-16
Northeast Region Home Ownership

	1990	2000	Change
Northeast Region	62.0%	63.2%	1.2%
Massachusetts	59.5%	57.5%	-2.0%
% Over / Under State	2.5%	5.7%	3.2%

Source: U.S. Bureau of the Census, Decennial Population Census

Housing

The Region faces a serious housing problem that places a major roadblock in front of long-term community development. Housing prices have gone up faster than incomes and there is a shortage of rental units. A detailed study of the housing issue in the Merrimack Valley conducted by the University of Massachusetts Lowell's Center for Family, Work, and Community concluded that the Merrimack Valley has too few units and, the units that do exist are too expensive. The problem will only worsen over time, because new units are not being created quickly enough. In 2000, the region-wide vacancy rate for apartments was 2.6 percent; in June 2001, the rate in Lowell was one percent. It is estimated that the demand for rental housing in greater-Lowell will exceed the supply by over 2,000 units in 2004, with affordable units disappearing at an alarming rate. This represents a serious challenge, since approximately 34 percent of Northeast residents are renters (see figure 6-15 and 6-16 on previous page).

The Merrimack Valley Planning Commission linked two important issues – brownfields development and housing – in its May 2001 report entitled, “Economic Development Strategy for the Merrimack Valley.” It suggested the residential reuses of older mill buildings “to provide housing for employees and to enliven the districts at night.” Individual cities and towns cannot resolve the shortage by themselves. Community-based organizations, labor unions, local and regional community development corporations, immigrant organizations, and faith-based organizations must cooperate to resolve the housing crunch.

Regional Strengths and Competitive Advantages

Four keys to the Region's past success were: access to water power, skilled craft labor, transportation, and the latest in mill technology. The area continues to enjoy a strong skill base, though demographic trends and the fast pace of change in many jobs in the New Economy indicate that we should not take this strength for granted. Looking ahead, the Region's critical strengths are:

Skilled workforce. A concentration of excellent technical high schools and educational institutions provides a solid foundation for economic prosperity. Labor unions and faith-based organizations also contribute to workforce education and training to boost the skill base and keep the Region attractive for employers. These groups also help keep work in the Region, attract new investments, and encourage start-ups.

Immigrant contributions. Lowell alone has over 300 immigrant-owned businesses, representing people from at least 22 different countries. These entrepreneurs serve the consumer needs of their communities, add value to the broader service sector, and revitalize

our neighborhoods. Immigrant workers are concentrated in skilled and semiskilled production across the Commonwealth's manufacturing industries, which provide “a major share of the State's exports to other states and to other countries.”⁸

Culture of collaboration. A shared perspective on what it takes to create an equitable and sustainable economy is beginning to take shape. As the Northeast moves away from a reliance on a handful of dominant employers, these emerging networks may represent the best hope for the regional economy. Collaborative efforts can focus attention on important environmental concerns, establish broad-based coalitions to address the housing crisis, raise awareness of the important role that immigrants play in the social and economic life, and help launch and support new ventures that generate income for the Region.

Challenges to Future Growth

Many families did not benefit from the 1990s boom. Average family income for the bottom 40 percent of families has not grown since 1993, and both child poverty rates and the use of emergency housing and food services have increased.⁹ Decreased access to affordable housing and the failure of the last business expansion to reach all sectors of the population, particularly in its older mill cities, means there is much work to do to safeguard and enhance the Region's strengths.

Affordable housing. For many workers employed in the service sector or in part-time jobs, wages have not kept pace with the purchase price of a home or rent on a three- or four-bedroom apartment. Nor has the construction of affordable rental units kept pace with demand. From 1996 to 2000, average home prices in the Northeast increased 51 percent to \$194,372 from \$128,389, compared to a State increase of 48 percent to \$205,312 from \$139,018.

Creating opportunities for low-skilled workers. As home to some of the State's poorest areas, there is concern about what will happen to students who may not pass the MCAS tests. The dropout rate in many of the Region's high schools is already extremely high, and every effort must be made to see that educational reform enhances, rather than diminishes, the prospects of our young people. There is also concern about what single mothers, particularly those that have used up their years of welfare eligibility, will do in a regional economy that offers few jobs to those with limited skills.

Brownfields. Much of the Region's recent growth proceeded on so-called greenfield sites. For many communities, however, such buildable space is just about gone. Old industrial and commercial buildings at the center of our largest cities and towns are typically

viewed as liabilities rather than assets. Overcoming this perception, reusing older buildings, and revitalizing our urban spaces will be critical if the Region is to have adequate developable land to support its future growth.

Transition in Community Leadership. The Region's large employers have traditionally guided its educational, economic, and civic resources. As these companies break up and disappear, this leadership vacuum needs to be filled. Community-based organizations, start-up businesses, grassroots coalitions, broad-based development agencies, labor unions, and higher education play increasingly important roles in addressing issues bearing on the Region's long-term development.

The recent drop-off in manufacturing. There have been massive layoffs in the information technology and high-tech manufacturing sectors since mid-2000, and hiring has virtually stopped for a host of high-paying jobs. This could have a serious ripple effect across the Region. A loss of thousands of good jobs will affect the housing market. Hundreds of relatively new retail and service companies, such as day care, lawn care, restaurants, take-out food, upscale car dealerships, Web design firms, home remodeling, will also face challenges when their customer's disposable income dissolves.

Regional Policy Priorities

The Northeast has an impressive concentration of innovative high-tech firms. They are supported by a diverse subset of locally-owned companies and a host of agencies and organizations concerned with issues such as job training, immigrant business assistance, and affordable housing. It also has public and private higher education institutions—including the University of Massachusetts Lowell, Northern Essex Community College, Middlesex Community College, and Merrimack College—that are deeply committed to the social and economic development of northeastern Massachusetts. This community, however, has a few clear issues to address:

Better training for low-skilled workers. There is also a need for improved coordination and service delivery of Adult Basic Education and English classes for speakers of other languages. Such programs are especially important to the cities that have experienced an influx of non-English speaking immigrants.

Redevelopment of brownfields. Progress has been made in several cities, most notably in Lowell. Andover, Haverhill, Lawrence, Lowell, Newburyport, and other cities have also turned abandoned mill sites and defunct malls into attractive space for high-tech manufacturing start-ups, software companies, design studios, university laboratories and offices, restaurants, and retail uses. Nevertheless, a regional strategy to reclaim old mill space is essential if the older cities are to flourish.

Diversifying the Region's economic base. Reliance on a relatively small number of major employers has made the Region vulnerable to economic downturns. The latest recession hit the area hard and resulted in a significant loss of jobs in high-tech manufacturing. A sustained and coordinated effort will be needed to ensure that the Region is better prepared to weather future economic downturns.

Linking the Region's Policy Priorities to Potential Solutions

Part III provides a variety of policy options that can help address the Region's economic development priorities. Figure 6-17 shows where to find relevant options.

figure 6-17

Northeast Region Policy Options for Regional Priorities

Policy Priority	Policy Options, Under Desired Outcomes in Part III
Better training for low-skilled workers	See "Worker skills match the needs of business and the competitive environment," pg. 124.
Brownfields redevelopment	See "Massachusetts is a leader in implementing development strategies that preserve high quality of life," pg. 128.
Diversifying the region's economic base	See "A statewide climate where entrepreneurs flourish," pg. 119. See "Reduced disparities in entrepreneurial opportunities," pg. 120. See "A Strengthened technological innovation infrastructure," pg. 121. See "Strong export industry clusters throughout Massachusetts," pg. 118. See "Firms in our export industry clusters continually innovate to meet high-value customer needs most effectively," pg. 119. See "State government provides more effective and better coordinated services to businesses, particularly small businesses," pg. 131.

⁸ W. Neil Fogg, Neeta Fogg, and Andrew Sum, *The Changing Workforce: Immigrants and the New Economy in Massachusetts*, Boston, The Massachusetts Institute for a New Commonwealth, 1999. Lawrence has the highest percentage of Hispanic residents in Massachusetts (60%), and Lowell the highest percentage of Asian residents (17%) (Merrimack Valley Economic Development Council, U.S. Census reveals growth, and change as the Merrimack Valley heads into a new century, Report, 2, May-June, 2001.) For an analysis of immigrant-owned enterprises in Lowell, see Linda Silka and Robert Forrant, "Moving Toward Equity and Economic Empowerment: Some Observations on Immigrant and Ethnic Enterprises in Lowell, Massachusetts," University of Massachusetts Lowell Department of Regional Economic and Social Development, unpublished paper, March 1999.

⁹ Randy Albelda, Donna Haig Friedman, Elaine Werby, "Still Struggling to Survive," *Boston Globe*, July 6, 2001, A23; Kimberly Blanton, "In N.E., Boom and Less Thunder," *Boston Globe*, June 19, 2001, D1.